

CLAIMS

1 1. A massage device, comprising:
2 a flexible fluid supply conduit;
3 at least two massaging projections mounted in relation to the fluid supply conduit, the at
4 least two massaging projections each having at least one surface adapted to contact a skin surface
5 of a user;
6 at least one chamber positioned in fluid communication with the fluid supply conduit;
7 at least one impeller positioned in the at least one chamber and capable of rotating
8 relative to the fluid supply conduit;
9 the fluid conduit having at least one outlet positioned proximate to the impeller for
10 contacting the at least one impeller with a fluid, wherein the fluid causes the impeller to rotate;
11 and
12 at least one weight rotationally coupled to the impeller, a center of mass of the at least
13 one weight arranged off-center to a rotational axis of the impeller causing the at least two
14 massaging projections to move in an oscillatory motion relative to the fluid supply conduit,
15 wherein a user can move the massage device attached to the flexible fluid supply conduit
16 to provide a massaging action to different areas of the user's body.

1 2. The massage device of claim 1, wherein the at least one weight is coupled to at
2 least one gear driven by the impeller, whereby the center of mass of the weight is off-center to a
3 rotational axis of the at least one gear.

1 3. The massage device of claim 2, further comprising at least one stop on the at least
2 one gear for limiting the rotation of the at least one weight.

1 4. The massage device of claim 2, wherein the at least one gear comprises a first
2 gear and a second gear in communication with the at least one impeller through at least one
3 center gear positioned between the first and second gears.

1 5. The massage device of claim 4, wherein the first and second gears each include at
2 least one weight having a center of mass and the center of mass of the first gear is movable
3 relative to the first gear.

1 6. The massage device of claim 5, further comprising at least one stop element
2 extending from the first gear for limiting movement of the at least one weight.

1 7. The massage device of claim 5, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned a first distance from an axis of rotation of the first
3 gear in a first position, and the center of mass of the at least one weight attached to the first gear
4 is positioned at a second distance from an axis of rotation of the first gear in a second position,
5 whereby the first and second distances are not equal.

1 8. The massage device of claim 5, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned between about 185 degrees and about 200 degrees
3 out-of-phase with the at least one weight attached to the second gear.

1 9. The massage device of claim 5, wherein the center of mass of the at least one
2 weight attached to the first gear is positioned in-phase with the at least one weight attached to the
3 second gear.

1 10. The massage device of claim 5, wherein the at least one weight of the first gear is
2 attached to the first gear so that the at least one weight moves relative to the first gear while the
3 at least one weight of the second gear remains substantially motionless relative to the second
4 gear.

1 11. The massage device of claim 1, further comprising at least one body rotatable
2 about a shaft, the body including a slot for receiving a first cam and having at least one
3 massaging projection coupled thereto, and the first cam positioned in the slot and mechanically
4 coupled to the at least one impeller.

1 12. The massage device of claim 11, further comprising a second cam pivotably
2 coupled to the first cam for changing the action of the body depending on the direction of
3 rotation of the at least one impeller.

1 13. The massage device of claim 12, wherein the second cam is positioned relative to
2 the first cam to change between a large oscillation pattern and a small oscillation pattern.

1 14. The massage device of claim 1, wherein the fluid supply conduit comprises at
2 least one end capable of being releasably attached to a fluid outlet fitting.

1 15. The massage device of claim 1, further comprising at least one valve coupled to
2 the fluid supply conduit for controlling fluid flowing through the fluid supply conduit and
3 striking the at least one impeller.

1 16. The massage device of claim 15, wherein the at least one valve is adjustable
2 between an off mode, an open mode allowing fluid to flow through a first outlet, and an open
3 mode allowing fluid to flow through a second outlet, and further comprising at least one conduit
4 coupled to the first outlet and having at least one end positioned proximate to the at least one
5 impeller to expel a fluid to rotate the impeller in a first direction and comprising at least one
6 conduit coupled to the second outlet and having at least one end positioned proximate to the at
7 least one impeller to expel a fluid to rotate the impeller in a second direction that is generally
8 opposite to the first direction.

1 17. The massage device of claim 16, wherein the at least one impeller comprises a
2 first portion having a first diameter and a second portion having a second diameter that is greater
3 than the first diameter, and wherein the at least one end of the at least one conduit coupled to the
4 first outlet is positioned to expel a fluid from the end to rotate the at least one impeller in the first
5 direction, and the at least one end of the at least one conduit coupled to the second outlet is
6 positioned to expel a fluid from the end to rotate the at least one impeller in the second direction.

1 18. The massage device of claim 1, further comprising at least one rotation limiting
2 device for limiting a range of rotation of the projection relative to the fluid supply conduit.

1 19. The massage device of claim 18, wherein the at least one rotation limiting device
2 comprises at least one spring positioned between the fluid supply conduit and the projection.

1 20. The massage device of claim 1, further comprising at least one additive emitting
2 chamber for mixing the fluid with an additive contained in the at least one additive emitting
3 chamber.

1 21. The massage device of claim 20, further comprising at least one valve coupled to
2 at least one conduit for directing fluid into the at least one additive emitting chamber, wherein
3 fluid flow through the valve is adjustable along a continuum between a completely open mode
4 and a completely closed mode.

1 22. The massage device of claim 1, further comprising at least one aperture in the at
2 least one chamber for releasing the fluid from the device to contact a user.

1 23. The massage device of claim 1, further comprising at least one oscillation device
2 coupled to the at least one weight, wherein the device comprises at least one first chamber
3 containing the at least one impeller and at least one second chamber containing the at least one
4 oscillation device.

1 24. The massage device of claim 23, wherein the at least one oscillation device is
2 positioned in the second chamber, and further comprising a fluid barrier isolating the at least one
3 oscillation device from the at least one chamber and wherein the fluid barrier substantially
4 prevents the fluid from contacting the at least one oscillation device.

1 25. The massage device of claim 24, further comprising at least one drain positioned
2 in the at least one first chamber for draining fluids.

1 26. The massage device of claim 24, further comprising at least one drain positioned
2 in the at least one second chamber for draining fluids.

1 27. The massage device of claim 2, wherein the at least one gear is positioned in a
2 plane that is generally orthogonal to a longitudinal axis of the massage device.

1 28. The massage device of claim 2, wherein the at least one gear is positioned in a
2 plane that is generally parallel to a longitudinal axis of the massage device.

1 29. The massage device of claim 1, wherein one impeller is provided, which operates
2 all of the at least two massaging projections.

1 30. The massage device of claim 1, wherein at least two impellers are provided, each
2 impeller operating one massaging projection.

1 31. The massage device of claim 1, wherein the flexible fluid supply conduit has a
2 free end, and a fluid outlet fitting affixed to said free end, and wherein the device comprises a
3 portion of said fluid outlet fitting.

1 32. The massage device of claim 1, wherein the flexible fluid supply conduit has a
2 free end, and a fluid outlet fitting affixed to said free end, and wherein the device is provided
3 along the fluid supply conduit, remote from said fluid outlet fitting.

1 33. The massage device of claim 1, wherein the device is provided on a handle
2 attached to the fluid supply conduit.

1 34. The massage device of claim 33, wherein the handle is extendible.

1 35. The massage device of claim 31, wherein fluid supply to the at least one impeller
2 is controlled by a Venturi valve.

1 36. A massage device, comprising:
2 a flexible fluid supply conduit;
3 at least one massaging head mounted to the fluid supply conduit, the at least one head
4 having at least one massaging surface adapted to contact a skin surface of a user, wherein the at
5 least one massaging surface includes a domed shape;
6 at least one chamber positioned in fluid communication with the fluid supply conduit;
7 at least one impeller positioned in the at least one chamber and capable of rotating
8 relative to the fluid supply conduit;
9 the fluid conduit having at least one outlet positioned proximate to the impeller for
10 contacting the at least one impeller with a fluid, wherein the fluid causes the impeller to rotate;
11 and
12 at least one weight rotationally coupled to the impeller, a center of mass of the at least
13 one weight arranged off-center to a rotational axis of the impeller causing the at least one
14 massaging projection to move in an oscillatory motion relative to the fluid supply conduit,
15 wherein a user can move the massage device attached to the flexible fluid supply conduit
16 to provide a massaging action to different areas of the user's body.

1 37. The massage device of claim 36, wherein fluid supply to the at least one impeller
2 is controlled by a Venturi valve.

1 38. The massage device of claim 36, wherein the at least one weight is mounted to the
2 at least one impeller.

1 39. The massage device of claim 36, wherein the at least one massaging head has a
2 generally spherical shape.

1 40. The massage device of claim 36, comprising at least two massaging heads.

1 41. The massage device of claim 36, wherein rotatable massaging balls are provided
2 adjacent the at least one massaging head.

1 42. The massage device of claim 36, wherein the flexible fluid supply conduit is a
2 shower hose, the shower hose having a shower head attached to one end thereof, wherein the at
3 least one massaging head is provided along the shower hose remote from the shower head.